

NEW SOUTH AMERICAN VERBENACEAE

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DURANTA REPENS var. *MICROPHYLLA* (Desf.) Moldenke, comb. nov.

Duranta microphylla Desf., Cat. Hort. Paris, ed. 3, 392.
1829.

JUNELLIA STRAGULOIDES Moldenke, sp. nov.

Fruticulus nanus caespitosus; caulis abbreviatis lignosis ramis gracilibus abbreviatis puberulis; internodiis valde abbreviatis; foliis oppositis rigidis tripartitis amplexicaulibus, lobis patentibus puberulis argute acutis integris; inflorescentiis unifloris; corollis rubellis.

Diminutive alpine shrub, forming small rosettes, pressed together into dense wood-hard cushions to 1 m. in diameter, usually flattened, sometimes mounding slightly in the center; stems abbreviated, woody, prostrate; branches slender, abbreviated, prostrate or decumbent, puberulent; internodes greatly abbreviated; leaves opposite, rigid, uniformly yellow-green on both surfaces, tri-partite, clasping at base, the divisions oblong, 2--5 mm. long, sharply acute at apex, divergent, puberulent, entire, usually obscurely veined; inflorescence reduced to solitary axillary flowers, borne in great abundance; calyx cupuliform, about 2 mm. long, white-puberulent or strigillose; corolla pale-pink, its tube 4--5 mm. long, its limb about 4 mm. in diameter.

The type of this species was collected by Edward K. Balls (no. 6000) in screen-like open patches among upland grasses on rolling non-calcareous soil in valleys above San Gregorio, Tilcara, at an altitude of 14,000 feet, Jujuy, Argentina, on February 11, 1939, and is deposited in the United States National Herbarium at Washington.

VERBENA PARAGUARIENSIS Moldenke, sp. nov.

Herba; caulibus simplicibus erectis albedo-strigosis; foliis oppositis sessilibus ad caulem arcte adpressis; laminis lanceolatis attenuatis acutis integris subrevolutis, ad basin rotundatis vel obtusis, utrinque strigosis; inflorescentiis terminalibus spicatis multifloris, floribus alternis imbricatis.

Herb, to 6 dm. tall; stems usually simple and erect, strigose with closely appressed whitish antrorse hairs; leaves decussate-opposite, numerous, appressed to the stems, sessile; blades lanceolate, 6--23 mm. long, 1--3 mm. wide, attenuate above to the rather sharply acute apex, rounded or obtuse at base, entire and usually subrevolute along the

margins, strigose on both surfaces like the stems; inflorescence terminal, spicate, terminating the stems, solitary 10--20 cm. long, about 1 cm. wide throughout, many-flowered, the flowers alternate, imbricate, somewhat spreading; rachis slender, more or less flexuous, strigose like the stems; bractlets 2--3 mm. long, closely appressed to the calyx, strigose.

The type of this peculiar species was collected by Teodoro Rojas (Hassler 2751) on high plateau and declivities, Sierra de Amambay, Paraguay, in December, 1907, and is deposited in the Delessert Herbarium of the Conservatoire Botanique at Geneva.

VITEX APPUNI Moldenke, Geogr. Distrib. 21 & 26, nom. nud. (1939), sp. nov.

Frutex vel arbor; ramulis sarmentisque obtuse tetragonis vel subteretibus medullosis dense breviterque pubescentibus subglabrescentibus; foliis 3- vel 5-foliolatis, plerumque 3-foliolatis; petiolis gracillimis dense breviterque pubescentibus; foliolis sessilibus submembranaceis ellipticis vel subobovato-ellipticis, ad basin et apicem acuminatis, integris vel crasse serratis, supra dense puberulis, subtus densissime pubescentibus vel tomentellis; inflorescentiis axillaribus capitatis dense multifloris.

Shrub or tree; branchlets and twigs medium or slender, obtusely tetragonal or subterete, medullose, gray-brown, the youngest shoots densely short-pubescent with cinereous pubescence, the older ones sparsely puberulent or subglabrate; leaf-scars on older wood rather large and semi-circular, usually with elevated margins; nodes not annulate; principal internodes 1.5--6 cm. long or more abbreviated on short axillary twigs; leaves decussate-opposite, 3- or 5-foliolate, mostly 3-foliolate; petioles very slender, 1.2--6 cm. long, convex beneath, flattened above, densely short-pubescent like the young twigs; leaflets, when 3, subequal in size or the lateral ones slightly smaller, when 5, the 2 lowermost often much reduced. all sessile or the central ones only subsessile; leaflet-blades submembranous, rather dark-green above, much lighter beneath, the central one elliptic or subobovate-elliptic, 3--9 cm. long, 1.5--3 cm. wide, acuminate at apex and base (the lateral ones usually acute at base), entire or coarsely and irregularly serrate with rather few blunt teeth, densely puberulent above, becoming much more sparsely so in age, very densely short-pubescent or tomentellous beneath; midrib very slender, subimpressed above, prominulous beneath; secondaries very slender, 9--11 per side, flat (and often inconspicuous) or subimpressed above, prominulous beneath, arcuate-ascending, not plainly anastomosing; vein and veinlet reticulation mostly obscure

on both surfaces; inflorescence axillary, cymose, capitate, 3--7 cm. long, 1--2.5 cm. wide, densely many-flowered; peduncles slender, 2--5.5 cm. long, more sparsely short-pubescent than the young twigs, flattened; pedicels very slender, 1--3 mm. long; bracts none; bractlets few, linear, 2--4 mm. long, densely pubescent; prophylla minute, setaceous, 1 mm. long or less, densely pubescent.

The type of this species was collected by Carl Friedrich Appun (no. 1885) -- in whose honor it is named -- probably on or near Mount Roraima, British Guiana, and is deposited in the herbarium of the Royal Botanic Gardens at Kew. The species is known also from Amazonas, Brazil.

VITEX FROESII Moldenke, sp. nov.

Arbor; ramulis glabrescentibus; hornotinis crassis densissime villosa-tomentosis, pilis fulvis; petiolis crassis densissime fulvo-villosis; foliolis 3 sessilibus subcoriaceis late ellipticis vel obovatis, ad apicem rotundatis vel subcuspidatis integris utrinque dense villosa-velutinis; inflorescentiis glomeratis sessilibus bracteosis densissime longaeque villosis.

Tree, to 15 m. tall; trunk to 18 cm. in diameter; branchlets medium-stout, gray, obtusely tetragonal, glabrescent; young twigs stout, obtusely tetragonal, very densely villous-tomentose with long fulvous hairs; buds densely long-villous; nodes somewhat enlarged and ampliate, not annulate; principal internodes 2.5--8 cm. long; leaves decussate-opposite, trifoliolate; petioles stout, 4.5--11 cm. long, very densely villous-tomentose with fulvous hair similar to that on the twigs; petiolules absent; leaflets 3, sessile, subcoriaceous, broadly elliptic or obovate, lighter beneath, the central one 8--18.5 cm. long, 5--12.3 cm. wide, rounded or very slightly cuspidate at apex, entire, slightly undulate or sinuate, cuneate and symmetrical at base, densely villous-velutinous on both surfaces, more conspicuously so beneath, with flavescent hairs; midrib stoutish, prominulous (except toward the apex) above, very prominent beneath; secondaries slender, 10--15 per side, ascending, not much arcuate (except toward the margins), close together, joined in many loops at the margins, very slightly impressed above, prominent beneath; veinlet reticulation abundant, slightly impressed above, prominulous beneath; lateral leaflets similar, practically the same size as the central one or slightly smaller, but usually asymmetric at base or asymmetric throughout, often rounded or subtruncate at base, or the outer half broadly rounded and the inner half cuneate at base; inflorescence glomerate, sessile, bracteose, very densely long-villous with fulvous hairs; bracts numerous, lanceolate, 1.8--2.3 cm. long and

2--5 mm. wide at base, sessile, densely villous on the outer surface, concave from within, an opposite pair closely appressed to the base of the calyx and alternate with its lips; calyx tubular, about 1.8 cm. long and 5 mm. wide, distinctly 2-lipped, one lip 2-lobed at apex, the other 3-lobed, the lobes 1--3 mm. long, slender, triangular-acuminate, the sinuses between the lips about 5 mm. deep, in fruit greatly enlarged and splitting to the base, the 2 halves broadly ovate-elliptic, to 2.5 cm. long and 1.7 cm. wide, the lobes 5--7 mm. long; corolla and fruit not seen.

The type of this most remarkable and distinctive species was collected by R. Fróes (no. 11,660) -- in whose honor it is named -- on high land in a high forest, terra firma along the Rio Pindare, Rapoza Monção, Maranhão, Brazil, on December 15, 1937, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VITEX GUIANENSIS Moldenke, Alph. List Common Names 14, nom. nud. (1939); Geogr. Distrib. 21, nom. nud. (1939), sp. nov.

Arbor alta; ramulis gracilibus obtuse tetragonis dense breviterque rufescento-tomentosis; foliis 5-foliolatis; petiolis gracillimis dense rufescento-tomentosis; foliolis stipitatis ellipticis acutis vel breviter acuminatis integris vel obscure repando-undulatis, ad basin acutis vel breviter acuminatis, supra sparse ferrugineo-hirsutulis, subtus dense hirsutulis; inflorescentiis axillaribus abbreviatis.

Tree, to 90 feet tall, slightly buttressed, inclined to be fluted, with pale-gray thin papery bark; branchlets rather slender, obtusely tetragonal, densely tomentose with rufescent rather short hairs, the tomentum wearing off in age; nodes annulate, flattened; principal internodes 2--6 cm. long; leaf-scars rather large and prominent; leaves deciduous, strongly scented, 5-foliolate; petioles very slender, 4--10 (---18.5 ?) cm. long, densely rufescent-tomentose (in age stout and glabrous ? -- one old petiole, without leaflets, is mounted on an isotype, but may not belong to this species); leaflets thin-chartaceous or submembranous, dark-green above, slightly lighter beneath, unequal, the 2 lowermost mostly considerably smaller than the rest, short-petiolulate; petiolules very slender, 1.5--4 mm. long, densely rufescent-tomentose; central leaflet-blades elliptic, 8.6--15.5 cm. long, 3.1--6.8 cm. wide, acute or short-acuminate at apex, entire or obscurely repand-undulate, acute or short-acuminate at base, sparsely hirsutulous above with scattered ferruginous hairs, very densely so along the midrib and larger veins, somewhat more densely hirsutulous beneath, especially along the larger venation; midrib slender, flat above, prominent beneath; secondaries very slender, 10--

15 per side, arcuate-ascending, mostly flat and rather obscure above, prominulous beneath, anastomosing in many loops (indistinctly) at the margins; veinlet reticulation indiscernible above, the larger portions slightly prominulous beneath; inflorescence axillary; cymes abbreviated, much shorter than the petioles; peduncles, pedicels, and young shoots covered with a brown felt of hairs; flowers in erect umbelloid cymes; calyx pale-green, erecto-patent; corolla bilabiate, the upper lip composed of 2 white reflexed lobes, the lower lip composed of 3 blue-purple lobes, with a patch of pale-yellow hairs at the base of the central lobe, reflexed; corolla-tube blue-striate; filaments up to $1/4$ longer than the corolla-tube, flushed with purple; anthers blue.

The type of this species was collected in baniaballi (myrtaceous) bush on the top of an Ironstone Hill where there was no uniform soil covering, but only soil pockets, British Guiana (British Guiana Forestry Department 2543), on October 28, 1937, and is deposited in the herbarium of the Royal Botanic Gardens at Kew. The native Arawak name is "hakiaballi".

VITEX KRUKOVII Moldenke, Geogr. Distrib. 27, nom. nud. (1939), sp. nov.

Arbor; ramulis compresso-tetragonis sparsissime pilosis; sarmentis densissime et valde conspicue villosa-tomentosis, pilis fulvis; foliis 5-foliolatis; petiolis gracilibus densissime villosa-tomentosis; foliolis stipitatis late ellipticis vel subobovatis breviter acuminatis integris, ad basin acuminatis vel cuneatis, supra in costa villosis, subtus in venis majoribus fulvo-villosis; inflorescentiis axillaribus capitatis 2- vel 3-floribus.

Tree, about 50 feet tall; branchlets dark, flattened-tetragonal, very sparsely pilose with scattered hairs; twigs slender, extremely densely and conspicuously villous-tomentose with long fulvous hairs; leaves decussate-opposite, 5-foliolate; petioles slender, 6.5--10 cm. long, rounded beneath, flat above, very densely villous-tomentose with fulvous hairs, slightly ampliate at apex; leaflets mostly symmetrical, the central noticeably larger than the two lowest and borne on longer petiolules, young leaves with all the petiolules obscure; petiolules 3--11 mm. long, very densely villous-tomentose with fulvous hairs; central leaflet-blades broadly elliptic or slightly obovate, 14--19 cm. long, 6.5--9 cm. wide, short-acuminate at apex, entire, acuminate or cuneate at base, villous along the midrib above and along the midrib and secondaries beneath, with long fulvous hairs, often also very sparsely so on the veinlet-reticulation beneath, basal leaflets similar but smaller, 6--9.5 cm. long, 2.8--4.5 cm. wide; midrib somewhat impress-

ed above, very prominent beneath; secondaries 10--15 on each side, close together, rather straight, abruptly arcuate-joined near the margins; inflorescence axillary, solitary, opposite, cymose; cymes capitate, apparently 2- or 3-flowered, 9--9.5 cm. long; peduncles slender, erect, divergent, 7--8 cm. long, densely villous-tomentose with long fulvous hairs (1--2 mm. long, like on the twigs and petioles), apparently bearing a few bractlets at the apex; fruiting-pedicles obsolete; fruiting-calyx cupuliform, large, about 9 mm. long and 12 mm. wide, densely strigose-villous with closely appressed rather long flavescent hairs, its rim deeply 5-lobed, the lobes triangular-ovate, long, rather narrow, acute, erect; fruit ellipsoid or rounded, about 14 mm. long and wide, extremely densely and beautifully villous with long (2--3 mm.) fulvous or brown glistening hairs, all forward-pointing and appressed.

The type of this handsome species was collected by Boris Alexander Krukoff (no. 6279) -- in whose honor it is named -- on "varzea" land near Tres Casas, Municipality Humayta, Amazonas, Brazil, between September 14 and October 11, 1934, and is deposited in the Britton Herbarium at the New York Botanical Garden.

VITEX MARTII Moldenke, Geogr. Distrib. 27, nom. nud. (1939), sp. nov.

Arbor; ramis ramulisque gracilibus obtuse tetragonis dense puberulis glabrescentibus; sarmentis gracillimis abbreviatis densissime fulvo- vel ferrugineo-puberulis; foliis 3--5-foliolatis; petiolis gracillimis dense breviterque fulvo- vel flavescento-pubescentibus; foliolis sessilibus vel subsessilibus chartaceis ellipticis argute acutis integris, ad basin acutis, supra leviter puberulis, subtus densiuscule puberulis; inflorescentiis axillaribus capitatis dense multifloris.

Tree; branches and branchlets slender, grayish, obtusely tetragonal, somewhat swollen at the nodes, densely puberulent with extremely fine matted grayish puberulence, becoming subglabrate in age, not noticeably lenticellate; twigs very slender, mostly abbreviated, very densely puberulent with fulvous or ferruginous hairs; nodes not annulate; principal internodes 1--2.8 cm. long or on young twigs extremely abbreviated (to 1 mm.); leaf-scars large, corky, prominent; leaves decussate-opposite, 3--5-foliolate; petioles very slender, 0.6--2.8 cm. long (at anthesis), densely short-pubescent with flavescent or fulvous hairs, flattened above, not noticeably ampliate at base; leaflets sessile or subsessile (at anthesis); leaflet-blades (at anthesis) chartaceous, rather uniformly bright-green on both surfaces or somewhat lighter beneath, the terminal one elliptic, 1.5--

3.5 cm. long, 6--11.5 mm. wide, sharply acute at apex, entire, acute at base, finely puberulent above, somewhat more densely so beneath, mostly conduplicate and reflexed; midrib very slender, plane above, slightly prominulous beneath; secondaries very slender, about 10 per side, ascending, short, not much arcuate; vein and veinlet reticulation very fine, indiscernible above, plane beneath; inflorescence axillary, capitate, 2--5 cm. long, 6--15 mm. wide, densely many-flowered, not brachiate, appearing before or with the leaves; peduncles very slender, 1.6--4 cm. long, densely short-pubescent or puberulent with flavescent or fulvous hairs.

The type of this species was collected by Carl Friedrich Philipp von Martius in the woods of the Catingas along the Rio São Francisco Salgado, Minas Geraes, Brazil, and is deposited in the herbarium of the Botanisches Museum at Munich. The species is known also from Bahia.

VITEX POLYGAMA var. BAKERI Moldenke, Alph. List Common Names 20, nom. nud. (1939); Geogr. Distrib. 27 & 40, nom. nud. (1939), var. nov.

Haec varietas a forma typica speciei recedit foliolis 5 sessilibus, ad basin longe acuminatis vel attenuatis; pilis ubique sericeo-velutinis et ferrugineis vel hirsutis.

This variety differs from the typical form of the species in its five leaflets being sessile and long-acuminate or attenuate at base, and the pubescence throughout being usually more silky-velutinous and ferruginous or hirsute.

The type was collected by Charles Fuller Baker (no. 281) -- in whose honor it is named -- in the vicinity of Pará, Pará, Brazil, on February 20, 1908, and is deposited in the herbarium of the Botanisch Museum at Utrecht. The variety is also known from Maranhão and from cultivation.

VITEX POLYGAMA var. DUSENII Moldenke, Geogr. Distrib. 27, nom. nud. (1939); Prelim. List Invalid Names 51, hyponym (1940), var. nov.

Haec varietas a forma typica speciei recedit bracteolis foliaceis, cymis dense congestis, lobis calycis longissimis foliaceis bracteoloideis.

This variety differs from the typical form of the species in its extremely long and foliaceous calyx-lobes, which greatly resemble the foliaceous bractlets which surround them in the dense and congested cymes.

The type was collected by Per Karl Hjalmar Dusén (no. 16,111) at the margins of primeval woods in the littoral region at Jacarehy, Paraná, Brazil, on December 13, 1914, and is deposited in the herbarium of the Naturhistoriska Riksmuseet at Stockholm. The variety is known also from Rio

de Janeiro.

VITEX POLYGAMA var. GLAZIOVII Moldenke, Geogr. Distrib. 27, nom. nud. (1939), var. nov.

Haec varietas a forma typica speciei recedit lobis calycis angustissimis elongatis sublinearibus vel oblongis bracteoloideis, fructibus valde carnosus, endocarpio centrale parvo.

This variety differs from the typical form of the species in its very fleshy fruits and small central endocarp, the fleshy portion being almost 2 cm. long and wide and the stony endocarp only about 11 mm. long and 6 mm. wide. The calyx-lobes are also very narrow and elongate, sublinear or oblong, 5--10 mm. long, resembling the bractlets.

The type was collected by Auguste François Marie Glaziou (no. 5959) -- in whose honor it is named -- at Restinga de Mauá, in the Organ Mountains, Rio de Janeiro, Brazil, between 1861 and 1887, and is deposited in the herbarium of the Royal Botanic Gardens at Kew.

VITEX POLYGAMA var. WARMINGII Moldenke, Geogr. Distrib. 27, nom. nud. (1939), var. nov.

Haec varietas a forma typica speciei recedit foliis sub anthesin valde immaturis cymis aequantibus, pilis conspicue flavescentibus vel ferrugineis et velutino-sericeis.

This variety differs from the typical form of the species in its leaves being very immature at the time of flowering and equaled in length by the cymes, and the pubescence throughout being very conspicuously flavescent or ferruginous and velutinous-silky, especially on the leaves, where it is very lustrous.

The type was collected by Johannes Eugenius Bülow Warming (no. 23/967) -- in whose honor it is named -- at Lagoa Santa, Minas Geraes, Brazil, and is deposited in the herbarium of the Universitetets Botanisk Museum at Copenhagen.

VITEX SCHOMBURGKIANA var. GRANDIFLORA Moldenke, Geogr. Distrib. 27, nom. nud. (1939), var. nov.

Haec varietas a forma typica speciei recedit floribus majoribus et cymis brachiatis.

This variety differs from the typical form of the species in its large flowers (the corolla-tube 7--8 or more mm. long, its limb about 10 mm. wide) and brachiate cymes, the cyme-branches often to 2 cm. long and very divergent.

The type of this variety was collected by Gustav Wallis (no. 64) on the Rio Branco, Amazonas, Brazil, and is deposited in the herbarium of the Botanisches Museum at Berlin.